PERSONAL SOFTWARE™

MICROCHESS

ATARI 400 & 800 8K
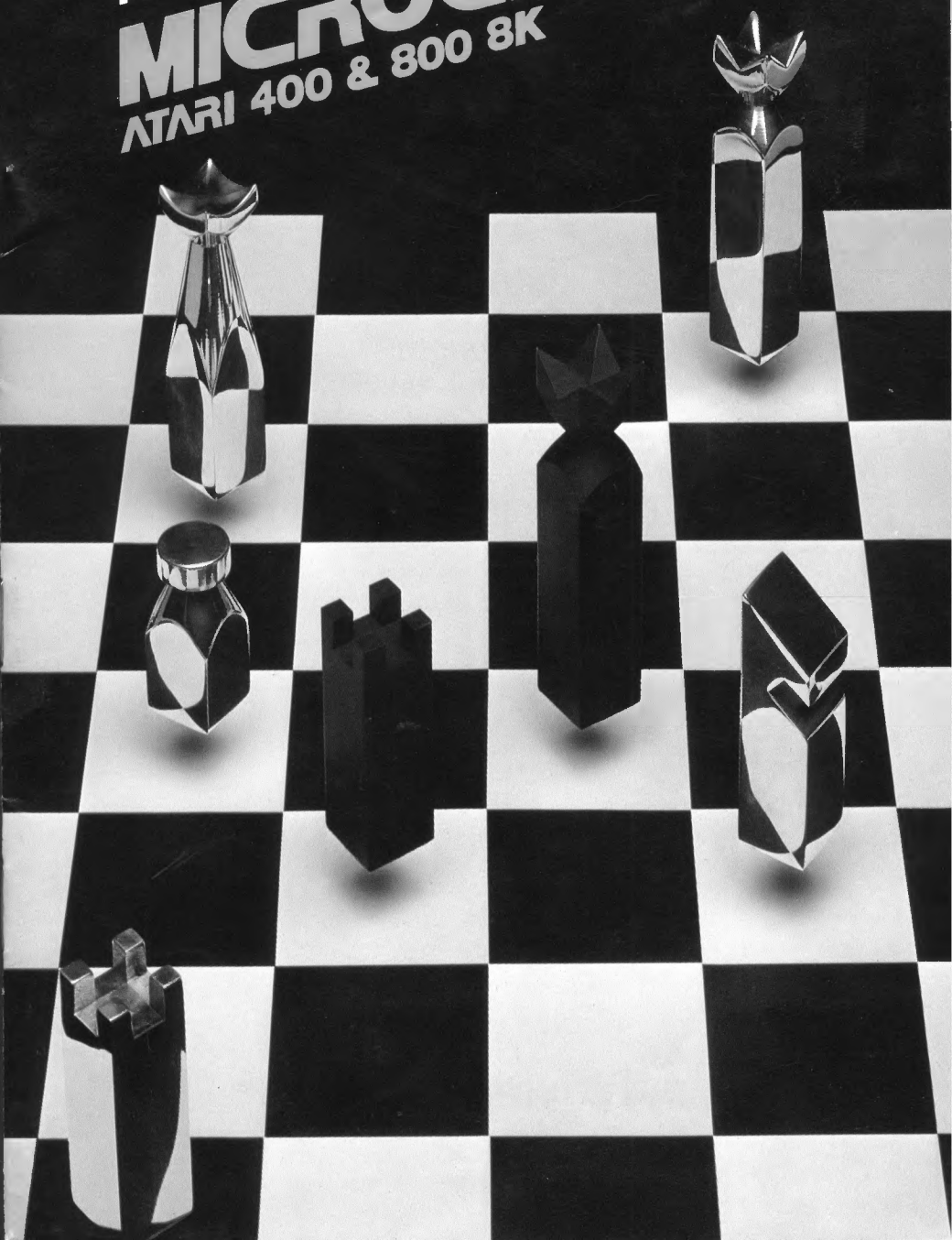
MICROCHESS

Program by
Peter Jennings

Introduction

Microchess™ 2.0 gives you a unique and exciting way to use your Atari to enjoy the intellectually stimulating game of chess. The complete program logic to play a very skillful game of chess, as well as the high resolution graphics routines to display the chessboard, can be loaded and run on any Atari with 8K or more memory. The program even includes in its memory knowledge of 32 different classic chess openings to a depth of 8 moves for each side.

Whether you're a novice or a skilled player, you can use your Atari with Microchess 2.0 to learn to play chess or to practice and improve your chess skills. Your Atari is always ready for a quick game of speed chess, or for a slow, patient game in which you ponder your moves.

The chessplaying logic of Microchess 2.0 is the result of several years of effort by Peter Jennings of Personal Software Inc. The chessboard display design and graphics routines are the work of Brad Templeton of Personal Software Inc. This manual was written by Dan Fylstra of Personal Software Inc. and Jef Raskin of Apple Computer. It was edited by Debra Spencer of Personal Software Inc.

Loading Microchess

Any Atari 400 or 800 can be used to play Microchess. Only 8K of memory is required. One cassette recorder is required. No user ROM cartridges should be present. This does **not** mean removing the Operating System cartridge from the memory chassis (the one labeled 10K).

All equipment should be turned off. If the disk unit is connected, it should also be off.

1. Rewind the tape cassette. Place the rewound tape in the Atari 410 tape unit. Zero the tape counter.
2. Hold down the **START** key on the Atari console, and while holding it down, turn on the Atari power.
3. The Atari will now beep once. You may release the **START** key. Push **PLAY** on the tape unit.
4. Push **RETURN** on the Atari.
5. The tape will now load. The tape counter will advance to slightly under 60.
6. If you have an 8K Atari, do not be distressed by the crazy screen patterns that may appear near the end of the program load.
7. The Microchess program will come up running.

The message BOOT ERROR may appear temporarily on your screen if there is a problem. The Atari then produces the following display at the top of the screen: ATARI COMPUTER – MEMORY PAD. This enters the Atari memo pad instead of your Microchess program. If you find the message ATARI COMPUTER – MEMO PAD appearing at the top of the screen, you will need to try loading the program again. If you find yourself waiting after the tape counter has reached 60, you should rewind the tape cassette and repeat the above procedure for loading.

The Display

The chessboard displayed by Microchess should be quite familiar, since it is similar to the board displays found in most chess textbooks and newspaper columns. The Atari's men are always shown at the top of the display. You have the white pieces, and your Atari is set to play black. But you can easily turn the board around. Try it by typing:

X

(followed by **RETURN**). Then type **X** (and **RETURN**) again to set the chessboard back to its initial state.

To the bottom right of the chessboard screen is an area used for communication between you and the Atari. Among other things, the commands and moves you enter from the keyboard are displayed in this area as you type them. Watch what happens in this area as you try out the commands described below. You will see that it is your turn to play when the white block (cursor) appears in the command area at the bottom of the screen.

Before Making a Move

The first thing you should do is determine the skill level at which you wish to play. Microchess can play at eight levels of proficiency! Level 8 is the highest and Level 1 is the lowest. At the higher levels, your Atari will play a considerably better game of chess, but it will take more time to move as it considers more alternatives and evaluates each position more deeply. Level 8 requires an average of 90 to 100 seconds per move and searches up to six moves ahead.

To select the skill level for this game, Type **IQ =** and then type the number of your choice, from **1** to **8**. For example, if you type:

IQ =4

(and press **RETURN**, of course), Microchess will set its skill to the middle of the proficiency range. Don't worry if you make a typing error. Microchess allows you to correct errors with the Atari's keyboard. The **CLEAR** key will clear the input area, and the **DELETE/BACK S** key will back up the cursor one square to correct mistakes. Once you press **RETURN**, the skill level you have selected (e.g. **IQ =4**) will be displayed near the top of the communication area to the right of the chessboard.

If you don't choose an IQ, the Atari will choose one for you. But beware, your Atari likes a challenging game: it will always choose Level 8. You can also change the IQ level during the game, just before you make a move, by simply typing **IQ =** and your choice. The display will immediately reflect the new IQ level.

Playing the Game

Anytime the Atari can accept your commands (i.e., whenever the cursor is on the screen), you may press the **N** key. When you do this, a letter and a number will appear on the screen at the left side of each square. This is Standard Inter-

national Notation for chessboard locations. The squares are lettered "a" through "h" horizontally from the white queen's rook on the left, and numbered "1" through "8" vertically from white's rearmost rank at the bottom. Pressing the **RETURN** key causes the notation to disappear. Pressing the **N** key will immediately put up the chess coordinates on the screen.

To identify the move you wish to make, first type the notation for the square occupied by the piece to be moved, then type a - (hyphen), and then type the notation for the new square to which the piece is to be moved. Don't forget to press **RETURN** after the command. For example, to move the white king's pawn two squares forward on your first turn you would type:

E2-E4

and then press **RETURN**. The **RETURN** after your move will remove the coordinates if they are there. If you aren't a touch typist, or if you want to play a game of speed chess, you can use a shorthand numeric notation for your moves. Instead of typing one of the letters "a" through "h", you can use the numerals "1" through "8". Thus, 52-54 is equivalent to E2-E4. You can also omit the hyphen: 5254 is equivalent to 52-54 or E2-E4, except that it can be entered entirely from the top row of numeric keys.

As soon as you enter your move, the chess piece you have decided to move will flash in its current square on the board, move and then flash in its new position. Your Atari will then begin thinking about what reply move it should make. This can take anywhere from a few seconds to a minute and a half, depending on the skill level.

When your Atari has decided on its move, it will beep to alert you to look at the screen. Then it will flash and move its piece, just as it did for your piece. The Atari also displays its latest move in Standard International Notation just above the area where you type your move. A little higher up on the screen is the number of the move, which will be Ø1 for your first move.

As mentioned earlier, your Atari always starts the game graciously by offering you the white chess pieces and the first move. If you would prefer to play the black pieces, type:

X

and then press **RETURN**. Microchess will reverse the chessboard, giving you the black pieces and the Atari the white ones. Now, of course, your Atari should make the first move. If you wish the Atari to move now (or at any time during the game) rather than wait for you to move, type:

P

followed, of course, by **RETURN**.

If you try to make an illegal move or to give the Atari a command it can't understand, it will let you know with a beep and a ?. When you retype the command correctly (or the move legally) your Atari will do what you ask.

Microchess allows your Atari to make some of the more unusual moves used in chess play, such as the promotion of pawns, castling, and en passant captures. When a pawn first reaches the opposite side of the chessboard, your Atari will "promote" it, or exchange it for another piece of higher rank.

Castling can be achieved by typing:

O-O

to castle on the king's side, or:

O-O-O

to castle on the queen's side. Note that the letter **O** must be typed and not the numeral ∅. Because of memory constraints, Microchess does not check the legality of castling moves, so be careful to make them correctly. If you do make an error, you can use the "asterisk" commands described below to correct it. If you are not sure of the rules for castling, consult a book on chess such as *Chess Self-Teacher* by Al Horowitz.

If you make an en passant capturing move, the Atari will also recognize this and remove its own pawn. Your Atari may also make en passant captures from time to time. (However, if you make the equivalent of an en passant move using the "asterisk" commands described below, this will not be considered an en passant situation, so the pawn will not be removed.)

Amenities

You can give the Atari the advantage of one or more extra turns by typing:

P

and pressing **RETURN**, instead of typing a move for yourself. The **P** command simply tells the Atari to make the next move.

If you would like to watch your Atari play a game against itself, you must preface each move with the **X** command to reverse the chessboard, and then the **P** command to tell the Atari to make the next move.

You can also give yourself extra moves by typing an asterisk (*) after the move notation. For example:

G1-F3*

followed by the **RETURN** key, will move the white king's knight from square G1 to square F3 without a response from the Atari and without relinquishing your turn. You can do much more with the "asterisk" notation, because Microchess will accept and execute what would normally be an illegal move if it ends with an asterisk. Thus, you can use "asterisk" commands to capture your own pieces, or move the Atari's pieces as you wish. For example, suppose that you wanted to let the Atari play white, and also give it a piece advantage by removing your own queen. You would first type:

X

(followed by **RETURN**) to reverse the board. Then you would use your own king to "capture" your queen with:

E8-D8*

(Because of the asterisk, the Atari will not make a reply move, so you can continue.) Then you would type:

D8-E8*

5

to reset your king to its own square, and finally:

P

to let your Atari take the first move of the game. More generally, you can use the "asterisk" notation to correct an error made on a previous move, or to set up a chess problem from a book, or a board position from a previous game. The only thing you can't do, unfortunately, is "revive" a piece that has been captured and has disappeared from the board.

If you finish a game and would like to play another, type:

R

And press **RETURN** to reset the chessboard. Note that this will also reset your Atari proficiency to 8, the highest level. You can type the **R** command when it is your move, to end a game and start another.

Press the **BREAK** key at any time to reset the game. Be very careful not to hit this key by accident.

Do not press **SYSTEM RESET** until you are finished. It wipes out the game and re-boots the Atari. The **SHIFT** and **CTRL** keys are unimportant in key pressing.

Appendix A: Command Summary

Command:	Action:
BREAK	This resets the game from the beginning.
IQ = X	Assigns the level of play from **1** to **8**, with **8** being the more advanced. **X** represents the number from **1** to **8**.
N	Typing this command causes the Standard International Notation for chessboard locations to appear on the chessboard. The numbers will remain on the board until you press **RETURN**.
P	This tells the Atari to make the next move.
R	Resigns a game in progress and draws a fresh board.
X	This command reverses the board, so that you are playing with the pieces the Atari was using before you typed the command.
*	This command gives you an extra move, and is appended to the move notation before entering it.